

Safety Advisory Committee

March 4, 2016

1:30 – 3:00 PM

Minutes

Committee Member	Representing	Present
V. Potapenko, M. O. Leimer, J. Willen	Human Resources Advisors	X
Bizarri, Greg	Molecular Biophysics and Integrated Bioimaging	X
Blodgett, Paul M.	Environment, Health and Safety Division	X
Bluhm, Hendrik	Chemical Sciences Division	X
Broughton, Jeff	Computing Sciences Directorate	
Chernowski, John	Facilities Division	X
Christensen, John N.	Earth Sciences Division	X
Dickerhoff, Darryl	Energy Technologies Area	X
Franaszek, Stephen	Genomics Division	
Greiner, Leo	Nuclear Science Division	X
Haber, Carl	Physics Division	X
MacGowan, Betsy	Information Technology Division	X
Martin, Michael C.	Advanced Light Source Division	X
Ravani, Shraddha	Biosciences Area	X
Schmid, Andreas	Materials Sciences Division	X
Seidl, Peter	Accelerator Technology and Applied Physics Division; SAC Chair	X
Thomas, Patricia M.	Safety Advisory Committee Secretary	X
von der Lippe, Henrik	Engineering Division	X

Others Present: Jim Floyd, Mary Gross, Ari Harding, Michael Johnson, Mike Kritscher, Glenn Kubiak, Quang Le, Martin Neitzel, Andrew Peterson, Tonya Petty, Scott Robinson, Scott Taylor, Bill Wells, Kat Wentworth, Marty White, Jennifer Willen, Mike Witherell

Meeting with Lab Director

Introduction to Safety Advisory Committee – Peter Seidl

Peter Seidl welcomed Mike Witherell to LBNL and introduced the Safety Advisory Committee (SAC) members. The purpose of SAC is to integrate the research and support operations perspective with LBNL safety goals. An important strength of the SAC is the participation of active researchers, who serve as a conduit between the research community and the EHS Division. SAC provides early, substantive feedback to the Environment, Health, and Safety Division (EHS) to help develop requirements that will be accepted and implemented. SAC provides advice, and LBNL and EHS management make policy.

SAC does much of its work through subcommittees and/or in coordination with other LBNL safety committees, including: Radiation Safety, Mechanical Safety, Electrical Safety, Laser Safety, Chemical Safety, Division Safety Coordinators, and Traffic and Pedestrian Safety.

The focus areas for SAC activities since the last Lab Director meeting in January 2015 have included:

- **Integrated Safety Management** trends,
- **Safety Culture** improvement -- efforts focused on the worker level first, based on a survey. Recently, there was an assessment of management-level involvement;
- **Electrical safety** – Efforts to improve electrical safety began in response to a major shock incident on a construction project. There has been an ongoing dialogue between SAC and the Electrical Safety Committee. SAC held a special meeting and solicited feedback from each Division. The results have included revised requirements, an Electrical Safety Manual, and new training requirements. Currently, we are working on establishing a Qualified Electrical Worker (QEW) program, including defining the requirements for researcher QEWs.
- **Accident and incident investigations** – SAC has reviewed the results of investigations for an electrical shock incident at the 88" Cyclotron, an overpressure incident at Bldg. 70, and series of incidents involving reactive chemicals and radiation non-compliances. Turn-around time for completing investigations is improving.
- **Emergency preparedness** – SAC has been paying attention to changes in the Protective Services organization, fire code compliance improvements, and the Facilities El Nino preparation and response team.
- **Work Planning and Control (WPC)** – This new system focuses safety planning on work activities; whereas the old Job Hazards Analysis system focused on workers and their supervisors. Getting WPC in place has been a great effort. Implementation is still a work in progress.

Another important function of SAC is to conduct Peer Reviews to assist Associate Lab Directors (ALDs) and Division Directors (DDs) in assessing their safety culture and implementation of ISM. The Peer Reviews help to identify and share best practices between Division Directors. The Areas or Divisions to be reviewed are selected by risk, time since last review, and requests from ALDs and Division Directors. The ALD/DD selects the topics and scope of the review. The SAC Chair selects the committee. The review results in a report to the ALD/DD, and they respond with a feedback and progress presentation to SAC. A Peer Review of Chemical Sciences Division is near completion. Peter Seidl is discussing the scope of the next reviews with the ALDs for Biosciences and Energy Technologies. The goal is to complete two Peer Reviews per year, and scheduling has been a challenge. Paul Allivisatos suggested that non-LBNL peer experts be invited to participate in Peer Review committees.

Lab Director Feedback – Mike Witherell

Lab Safety is important. Dr. Witherell spent a lot of time on safety at FermiLab, and was co-chair of the Safety Committee at UCSB.

He asked how LBNL was affected by the response to laboratory chemical incidents across UC. Jim Floyd responded that LBNL was aware of the incidents; however, because our chemical safety programs were in better shape than most UC campuses, the efforts were not as great here. LBNL has been working with UC to coordinate our personal protective equipment (PPE) requirements.

Mike Witherell agreed with Paul Allivisatos that getting outside people to participate in Peer Reviews could be valuable and worth the extra effort. It would help get past the “we’ve always done it this way” barrier. For example, he has gotten some good ideas about training programs from industry. It is important to get ALDs and DDs to take ownership of safety.

For the Work Planning and Control system, Mike Witherell suggested that we focus this year on whether WPC is making ISM better. Is the new software causing new problems?

Mike Witherell concluded that the work the SAC is doing is valuable to the Lab, and thanked the committee members for taking the time to participate. He invited anyone who has concerns about safety to come and talk to him.

John Christensen asked whether all Divisions do management walkthroughs. He suggested that it would be good to have more discussion between Division Directors on the results of their walkthroughs.

Business Meeting

Comments from the Chair – Peter Seidl

Two new people were introduced. Greg Bizarri is now the Representative for the new Molecular Biophysics and Integrated Bioimaging Division. Ari Harding has replaced Bob Mueller as the Chair of the Electrical Safety Committee.

EHS Pipeline – Bill Wells

Revision Type	Documents	Program/Policy	Significance	Status
Chemical Hygiene & Safety Work Process P. Specific Controls and Procedures – Organic Peroxide-Forming Compounds -- Revision	ESH Manual	Chemical Hygiene & Safety	C	Complete. Posted 2/26/2016
Laser Safety Program -- Major Revision	ESH Manual	Laser Safety Program	C	Web-draft completed for SME Review
Confined Spaces Program -- Major Revision	ESH Manual	Confined Spaces Program	D	Editing complete. Web-draft in process.
Fall Protection Program Major Revision	ESH Manual	Fall Protection Program	C	Editing complete. Changes reflect current practice.
Pressure Safety – major revision	RPM, ESH Manual	Pressure Safety	C	Major revision; final input from stakeholders, to be presented to SAC in Apr 2016.
ORPS & NTS Reporting Quick Guide	RPM	ES&H – Occurrence Rep.; RPM-PAAA Compliance	D	In final OCA Management Review
NFPA 45 Integration into Chem Hygiene and other EHS Manual Chapters -- Revision	EHS Manual	Chem Hygiene, Compressed Gasses, Ventilation, Fire Prevention and others	TBD	Integration plan in development
Delete requirement for Receiving to obtain MSDS/SDS– Minor Revision	RPM	Receiving Policy	E	Draft final, concurrence in progress

Revision Type	Documents	Program/Policy	Significance	Status
Roof Access – New Chapter	EHS Manual	Roof Access	TBD	SME Assigned, in queue for development
Traffic & Pedestrian Safety – Revision	EHS Manual	Traffic & Pedestrian Safety	TBD	Interim SME assigned. In queue for development.
Off-Site Work Authorization	RPM	Off-Site Work	TBD	Initial request for clarification, revise to accommodate WPC

Henrik von der Lippe commented that the Electrical Safety chapter is also being revised. The changes will be at a higher significance level and will require a communications plan.

Research Qualified Electrical Workers (QEWs) – Jim Floyd

The Qualified Electrical Worker (QEW) program is being rolled out in phases, prioritized by risk: 1. Subcontractors, 2. Facilities, 3. Engineering, and now 4. Researchers.

There are three parts to improving research electrical safety:

1. Work practices, such as Lockout/Tagout and zero voltage verification and identifying hazard thresholds. The Facility Contractor Operations Group (FCOG) subcommittee on electrical safety seems to be waiting for LBNL to take the lead on this.
2. Establishing the researcher Qualified Electrical Worker program, including defining responsibilities, developing training, and the qualification/authorization process, and
3. Ensuring electrical equipment is safe, through developing design standards and providing Engineering QEW support to help researchers design out hazards where possible.

The hazards are complex. We must start with the controls we have and define some short-term improvements to put in place until we have time to figure out together what the future state should look like. EHS is benchmarking what other Labs are doing and identifying best practices. The Electrical Safety Committee will be involved. In the short term, EHS is considering creating a QEW-Researcher category, to distinguish researcher needs from craft workers. There will be some limitations on what types of electrical work researchers can do.

Interim training requirements for researcher QEWs would focus on hazard awareness, including:

- Introduction to Electrical Safety at LBNL (4-hour course);
- Lockout/tagout;
- Electrical PPE/gloves;
- CPR/First Aid.

Over the long term, we need to bring WPC and EHS training into the process to develop the right training. Los Alamos requires 2 weeks of training.

To be successful, LBNL needs an institutional business model that includes all three components of research electrical safety (work practices, equipment, qualified workers) as a core competency to train the next generation of researchers.

Laboratory Safety Improvement Plan – Scott Robinson

There was a series of laboratory safety incidents in 2015, which prompted a DOE Chemical Safety Program Assessment in December 2015. Research divisions have experienced disruptions and EHS program development has been delayed. We are expecting a follow-up DOE review in May.

There have been some common themes to the causes of the safety events:

- Inadequate understanding and implementation of ISM;
- Inadequate tools – Work Planning and Control is not yet broadly understood as a daily ISM implementation tool, and EHS policies and programs have not been updated to reflect WPC; and
- Assurance systems (walkarounds, inspections, assessments) are not capturing all the risks.

A Laboratory Safety Improvement Plan (LSIP) was needed to address these risks. A gap analysis was performed to align Lab policy with NFPA 45 requirements. The Corrective Action Plans from the Molecular Foundry and Energy Technologies Area incidents and the Chemical Safety Program Assessment were reviewed and themes were identified as opportunities for improvement:

- Laboratory practices and conditions;
- Oversight, communications, and emergency preparedness;
- Line management accountability and assurance.

These corrective action plans are being consolidated into one LSIP. The key objectives are:

- Application of ISM at all levels;
- Development of better tools; and
- Robust and effective assurance processes

The concept of “communities of practice” recognizes that peers can provide help in analyzing hazards and developing controls. EHS is proposing to build tools to facilitate collaborations. Experienced scientists are the best people to determine how to train and qualify the next generation of scientists.

The Safety Advisory Committee can help by providing support and guidance to the LSIP leaders, particularly through the Chemical Safety Committee, and by communicating changes in programs to the Division Line Management.

Safety, Security, and Sustainability Fair – Tonya Petty

Protective Services/Emergency Management and the LBNL Sustainability office encourage everyone to participate in the Safety, Security, and Sustainability Fair near the Bayview Café on April 28. There will be vendors of emergency supplies, raffles for prizes, food sales, and a variety of interesting exhibits.

The meeting was adjourned at 3:00 PM
Respectfully submitted, Patricia M. Thomas, SAC Secretary